

PHYSICS & SOCIETY

A Publication of The Forum on Physics and Society • A Forum of The American Physical Society

Editor's Comments

In addition to the usual book reviews, we have recently published material on cinema and theater in the context of "physics and society", e.g., Michael Frayn's play "Copenhagen", and Sylvia Nasar's biography "A Beautiful Mind. I wonder how many of the readers of this journal have attempted to use theater, cinema, or other popular media to teach or otherwise deal with contemporary problems and opportunities of science and society. I would welcome the opportunity to publish reflections on such attempts in this journal. Perhaps we could even devote an entire issue to the intersection between arts and humanities and science. So this is another call to our membership to submit material – either in the humanistic mode mentioned above, or in the more "traditional" mode of "physics and society" issues- for publication in future issues of "Physics and Society".

Among the more "traditional" interests of the Forum, and this journal, has been the question of nuclear weapons and how to deal with them – are they just another class of weapons, in spite of their major non-Newtonian aspects, or are they somehow "transcendental"? The main thrust of previous American Administrations has been the latter – the use of nuclear weapons is to be contemplated only in situations threatening the continued existence of the nation. There are some indications, in the actions and documents of the present Administration, that they do not share this view. Von Hippel and Cirincione explore this topic in this issue (Gottfried in the last, web, issue). Also of continuing interest to our readers are the poli-

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EDITOR'S COMMENTS continued

tics and technology of energy and nuclear power, discussed here by Kaarsberg and Ahearne (and in the previous web issue by Chang).

Land mines are definitely "conventional" weapons but their use and disposition is still devastating to many of the world's peoples. As Blagden points out here, they also represent a challenge to the world's physicists. (Sen and Woodfin also discussed this challenge, in our previous web issue.) A more recently recognized challenge for physicists is how to deal with terrorism, discussed in this issue by Fainberg (and in the previous issue by Cobb and Koonin). Newtonian gravitation is no longer at the forefront of physics research but its application is the basis for another "physics and

society" concern – the possibility of war in space. This subject is examined, in this issue, by Sessler and myself. Also of considerable concern to our members should be "who are we" and "how do we get to be physicists", questions which are examined by Pugel and Urry. Finally, Brecher has a look at technology, a subject that can never be far from the mind of the physicist.

I hope you enjoy this "hard copy" issue of P&S, as well as the previous "electronic copy" issue. Have a good summer while you read them. And please remember to participate in the Forum: attend its meetings, participate in its committees, and submit materials to its journal.

News from the Chair

The Forum on Physics and Society has been granted its own seat on the APS Panel on Public Affairs (POPA), the main public policy body of APS. This should be a synergistic relationship, since the areas in which POPA acts are often those in which the Forum is deeply involved. This new relationship will keep both sides better informed, and help the APS tap the rich talent and expertise of Forum members.

The Forum's first representative to POPA, Aviva Brecher, was appointed at the end of 2001 for one year. At the end of this summer, the Forum will hold its first election for POPA representative. Requirements for this new position include membership in the Forum for at least 4 years, time to attend the 3 yearly meetings of POPA and participate in its activities, a commitment to regularly communicate with the Forum leadership and membership, and a willingness to listen, learn, and bring the best of oneself to the job. This position is a 3-year term, and the elected member will also serve as a member of the Forum's Executive Committee. This will be an all-electronic election, for which Forum members will receive an electronic reminder. The Forum's Nominating Committee, chaired by Daniel Kammen, is currently taking suggestions for nominees for this new position. He can be reached at <kammen@mindspring.com>. The Forum is proud to have permanent representation on POPA and looks forward to a long and fruitful relationship.

On a less joyful note, the Forum announces the departure of Marc Sher from its leadership, after a decade of extraordinary service. Marc, like many of the Forum leaders, was personally recruited,

and once on board, made tremendous contributions. He served three years on the Executive Committee, three years on POPA, was news editor and electronic communications editor of Physics & Society, developed the first Forum webpage, and started the first Forum electronic elections, paving the way for electronic elections at APS. In every position he served with energy, enthusiasm, and skill. He is always a pleasure to work with, and an inspiration to all who interact with him. It is with immense gratitude that we bid Marc farewell from our leadership, with the hope that he will return at some later time.

As the new chair of the Forum on Physics and Society, I am excited and a bit awed by the task before me. The membership of the Forum has broad interests, from Missile Defense, to Renewable Energy, to Climate Change, to Science in Commerce and Foreign Affairs, just to name a few. Each year we try to address some of these areas in both our newsletter and in our sessions at the APS March and April meetings, as well as other timely issues where science and society intersect. We can never deal with all the issues the membership would like, nor can I dream of being able to lead our efforts in so many areas. But I don't need to, because the heart and soul of the Forum is its very impressive Executive Committee. We are also supported by talented and knowledgeable people at APS. I look forward to a productive year, and hope you will participate in our activities.

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Disciplined Minds

by Jeff Schmidt

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The title, like the book, represents the double-edged sword of professional training. Does one's mind become more disciplined in graduate school—more focused, more devoted to one's subfield? Or is the mind of a graduate student disciplined into obeying the structure and hierarchy unique to one's field of study? In his book, author Jeff Schmidt explores the development of a professional and highlights those factors which he believes perpetuate the insular nature of the professional world.

The book begins with the development and behavior of a professional. Schmidt argues that a basic distinction must be made between a professional and a non-professional: the use of political skills (p.41). A professional, by his definition, is a person that an institution entrusts to maintain the ideologies of that institution. They have been trained to perpetuate the image of the institution.

This kind of professionalism comes at a price. In order to perpetuate the institution's ideologies, the human mind has two options: to genuinely believe in those ideologies—on the clock and off, or only to believe in them when the clock is ticking. Most people do not enter an institution in full agreement with every aspect of that institution's ideologies, so there is some break-in period for novi-

tiates. Schmidt talks about this in the context of graduate school as a "boot camp," where ideals are homogenized into the broth of the institutional soup.

That is, there is an inherent sacrifice of one's own role in the creative progress of the professional field while one is a drone. The example that he describes in much detail is the plight of the graduate student, who must sacrifice time, energy and income for the sake of the doctoral degree. Schmidt believes that the sacrificial nature of graduate school is necessary in order to prepare the student for the transition into a hierarchical system.

Drawing upon his personal experience as a physics graduate student at University of California-Irvine and stories of other students, Jeff Schmidt's book is an exploration into the developmental stages of a young professional. It is, at times, hard to read his book without sensing his bitterness towards his graduate school days leaking through. Perhaps it is necessary for us to be exposed to this bitterness in order to understand the effects that such clashes with bureaucracy can have on an individual.

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